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CLMPTO

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WHAT IS CLAIMED IS:

1. A coded signal separating and merging system comprising:
 - 5 a coded signal separating apparatus for inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal; and
 - a coded signal merging apparatus for inputting said second coded moving picture sequence signal and said differential coded moving picture sequence signal to reconstruct said first coded moving picture sequence signal,
 - 10 said coded signal separating apparatus including:
 - inputting means for inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient
 - 15 information including a matrix of first coefficients;
 - coded signal converting means for converting said first coded moving picture sequence signal inputted through said inputting means to generate said second coded moving picture sequence signal, said second coded moving picture sequence signal consisting of a series of second picture information having second coefficient
 - 20 information, said second coefficient information including a matrix of second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing
 - 25 common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks;
 - 30 differential coded signal generating means for inputting said first coded moving picture sequence signal and said second coded moving picture sequence signal from said coded signal converting means to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal,
 - 35 and said second coefficient information obtained from said series of said second picture information of said second coded moving picture sequence signal, said differential

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coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal;

5 separating storage means for selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal; and

first transmission means for selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal to said coded signal merging apparatus;

10 said coded signal merging apparatus including:

first receiving means for receiving a base coded moving picture sequence signal transmitted by said first transmission means from said coded signal separating apparatus, said base coded moving picture sequence signal being any one of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

15 merging storage means for storing coded moving picture sequence signal including said base coded moving picture sequence signal received by said first receiving means;

20 request signal determining means for determining a request signal for a requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored by said merging storage means; and

request signal transmission means for transmitting said request signal for said requested coded moving picture sequence signal determined by said request signal determining means to said coded signal separating apparatus;

25 whereby said coded signal separating apparatus further includes:

request signal receiving means for receiving said request signal transmitted by said request signal transmission means from said coded signal merging apparatus;

30 separating coded signal extracting means for extracting said requested coded moving picture sequence signal from said separating storage means in response to said request signal; and

second transmission means for transmitting said requested coded moving picture sequence signal extracted by said separating coded signal extracting means to said coded signal merging apparatus;

said coded signal merging apparatus includes:

35 second receiving means for receiving said requested coded moving picture sequence signal transmitted by said second transmission means from said coded signal

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separating apparatus;

merging coded signal extracting means for extracting said base coded moving picture sequence signal from said merging storage means;

- 5 merging means for merging said base coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested coded moving picture sequence signal received by said second receiving means on the basis of said second coefficient information obtained from said series of second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal to reconstruct said first coded moving picture sequence signal; and

10 outputting means for inputting said reconstructed first coded moving picture sequence signal from said merging means to be outputted therethrough.

2. A coded signal separating and merging system as set forth in claim 1, in which
15 said separating storage means of said coded signal separating apparatus is operative to store said differential coded moving picture sequence signal generated by said differential coded signal generating means,

said first transmission means is operative to transmit said second coded moving picture sequence signal generated by said coded signal converting means,

- 20 said first receiving means of said coded signal merging apparatus is operative to receive said second coded moving picture sequence signal transmitted by said first transmission means,

said merging storage means is operative to store said second coded moving picture sequence signal received by said first receiving means,

- 25 said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored by said merging storage means,

- 30 said request signal transmission means is operative to transmit said request signal for said requested differential coded moving picture sequence signal determined by said request signal determining means,

said request signal receiving means of said coded signal separating apparatus is operative to receive said request signal transmitted by said request signal transmission means,

- 35 said separating coded signal extracting means is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal,

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said second transmission means is operative to transmit said requested differential coded moving picture sequence signal extracted by said separating coded signal extracting means to said coded signal merging apparatus,

5 said second receiving means of said coded signal merging apparatus is operative to receive said requested differential coded moving picture sequence signal transmitted by said second transmission means from said coded signal separating apparatus,

said merging coded signal extracting means is operative to extract said second coded moving picture sequence signal from said merging storage means, and

10 said merging means is operative to merge said second coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal.

15 3. A coded signal separating and merging system as set forth in claim 2, in which said coded signal merging apparatus further includes second coded moving picture sequence signal decoding means for decoding said second coded moving picture sequence signal received by said first receiving means.

20 4. A coded signal separating and merging system as set forth in claim 2 or claim 3, in which

said coded signal merging apparatus further includes editing means for cutting and combining component parts of said second coded moving picture sequence signal stored by said merging storage means to generate an edited second coded moving picture sequence signal in a desired size,

25 said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said edited second coded moving picture sequence signal generated by said editing means,

30 said request signal transmission means is operative to transmit said request signal for said requested differential coded moving picture sequence signal determined by said request signal determining means to said coded signal separating apparatus,

said separating coded signal extracting means of said separating coded signal separating apparatus is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal, and

35 said merging means is operative to merge said edited second coded moving

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picture sequence signal generated by said editing means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said desired size.

- 5 5. A coded signal separating and merging system as set forth in claim-1, in which
 said separating storage means of said coded signal separating apparatus is
 operative to store said second coded moving picture sequence signal generated by said
 coded signal converting means,
 said first transmission means is operative to transmit said differential coded
10 moving picture sequence signal generated by said differential coded signal generating
 means to said coded signal merging apparatus,
 said first receiving means of said coded signal merging apparatus is operative
 to receive said differential coded moving picture sequence signal transmitted by said
 first transmission means,
15 said merging storage means is operative to store said differential coded moving
 picture sequence signal received by said first receiving means,
 request signal determining means is operative to determine a request signal for
 a requested second coded moving picture sequence signal on the basis of said
 differential coded moving picture sequence signal stored by said merging storage
20 means,
 said request signal transmission means is operative to transmit said request
 signal for said requested second coded moving picture sequence signal determined by
 said request signal determining means,
 said request signal receiving means of said coded signal separating apparatus is
25 operative to receive said request signal transmitted by said request signal transmission
 means,
 said separating coded signal extracting means is operative to extract said
 requested second coded moving picture sequence signal from said separating storage
 means in response to said request signal,
30 said second transmission means is operative to transmit said requested second
 coded moving picture sequence signal extracted by said separating coded signal
 extracting means to said coded signal merging apparatus,
 said second receiving means of said coded signal merging apparatus is
 operative to receive said requested second coded moving picture sequence signal
35 transmitted by said second transmission means from said coded signal separating
 apparatus,

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said merging coded signal extracting means is operative to extract said differential coded moving picture sequence signal stored by said merging storage means, and

5 said merging means is operative to merge said differential coded moving picture sequence signal extracted by said merging coded signal extracting means with said second coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal.

6. A coded signal separating and merging system as set forth in claim 5, in which
10 said first transmission means of said coded signal separating apparatus is operative to transmit said differential coded moving picture sequence signal by way of broadcasting.

7. A coded signal separating and merging system as set forth in any one of claim
15 2, claim 3, and 6, in which

said coded signal merging apparatus further includes reconstructed first coded signal storage means for storing said reconstructed first coded moving picture sequence signal reconstructed by said merging means.

20 8. A coded signal separating and merging system as set forth in claim 1, in which said coded signal merging apparatus further includes:

decoding means for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

25 merging coded signal converting means for inputting said first coded moving picture sequence signal to generate said second coded moving picture sequence signal.

said first transmission means of said coded signal separating apparatus is operative to transmit said first coded moving picture sequence signal.

30 said separating storage means is operative to store said differential coded moving picture sequence signal generated by said differential coded signal generating means,

said first receiving means of said coded signal merging apparatus is operative to receive said first coded moving picture sequence signal transmitted by said first transmission means from said coded signal separating apparatus.

35 said decoding means is operative to decode said first coded moving picture sequence signal received by said first receiving means.

said merging coded signal converting means is operative to input said first

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coded moving picture sequence signal received by said first receiving means to generate said second coded moving picture sequence signal,

said merging storage means is operative to store said second coded moving picture sequence signal generated by said merging coded signal converting means,

5 said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored by said merging storage means,

10 said request signal transmission means is operative to transmit said request signal for said requested differential coded moving picture sequence signal determined by said request signal determining means to said coded signal separating apparatus,

 said request signal receiving means of said coded signal separating apparatus is operative to receive said request signal transmitted by said request signal transmission means from said coded signal merging apparatus,

15 said separating coded signal extracting means is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal,

 said second transmission means is operative to transmit said requested differential coded moving picture sequence signal extracted by said separating coded signal extracting means to said coded signal merging apparatus,

20 said second receiving means of said coded signal merging apparatus is operative to receive said requested differential coded moving picture sequence signal transmitted by said second transmission means from said coded signal separating apparatus,

25 said merging coded signal extracting means is operative to extract said second coded moving picture sequence signal from said merging storage means, and

 said merging means is operative to merge said second coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said
30 desired size.

9. A coded signal separating and merging system as set forth in claim 1, in which said coded signal merging apparatus further includes:

35 decoding means for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

 merging differential coded signal generating means for inputting said first

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coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

said first transmission means of said coded signal separating apparatus is operative to transmit said first coded moving picture sequence signal,

5 said separating storage means is operative to store said second coded moving picture sequence signal generated by said coded signal converting means,

said first receiving means of said coded signal merging apparatus is operative to receive said first coded moving picture sequence signal transmitted by said first transmission means from said coded signal separating apparatus,

10 said decoding means is operative to decode said first coded moving picture sequence signal received by said first receiving means,

said merging differential coded signal generating means is operative to input said first coded moving picture sequence signal received by said first receiving means to generate said differential coded moving picture sequence signal,

15 said merging storage means is operative to store said differential coded moving picture sequence signal generated by said merging coded signal converting means,

said request signal determining means is operative to determine a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said merging storage

20 means,

said request signal transmission means is operative to transmit said request signal for said requested second coded moving picture sequence signal determined by said request signal determining means to said coded signal separating apparatus,

25 said request signal receiving means of said coded signal separating apparatus is operative to receive said request signal transmitted by said request signal transmission means from said coded signal merging apparatus,

said separating coded signal extracting means is operative to extract said requested second coded moving picture sequence signal from said separating storage means in response to said request signal,

30 said second transmission means is operative to transmit said requested second coded moving picture sequence signal extracted by said separating coded signal extracting means to said coded signal merging apparatus,

35 said second receiving means of said coded signal merging apparatus is operative to receive said requested second coded moving picture sequence signal transmitted by said second transmission means from said coded signal separating apparatus,

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said merging coded signal extracting means is operative to extract said differential coded moving picture sequence signal from said merging storage means, and

5 said merging means is operative to merge said differential coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested second coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said desired size.

10 10. A coded signal separating apparatus for inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal comprising:

15 inputting means for inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients;

20 coded signal converting means for converting said first coded moving picture sequence signal inputted through said inputting means to generate said second coded moving picture sequence signal, said second coded moving picture sequence signal consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including
25 one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect
30 to one of said blocks;

35 differential coded signal generating means for inputting said first coded moving picture sequence signal and said second coded moving picture sequence signal from said coded signal converting means to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal,

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and said second coefficient information obtained from said series of said second picture information of said second coded moving picture sequence signal, said differential coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal;

5 separating storage means for selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

first transmission means for selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said
10 differential coded moving picture sequence signal;

request signal receiving means for receiving a request signal indicative of a requested coded moving picture sequence signal to be transmitted, said request signal indicative of said requested coded moving picture sequence signal being determined on the basis of said first coded moving picture sequence signal, said second coded moving
15 picture sequence signal, or said differential coded moving picture sequence signal;

separating coded signal extracting means for extracting said requested coded moving picture sequence signal from said separating storage means in response to said request signal; and

20 second transmission means for transmitting said requested coded moving picture sequence signal extracted by said separating coded signal extracting means.

11. A coded signal separating apparatus as set forth in claim 10, in which

said separating storage means is operative to store said differential coded moving picture sequence signal generated by said differential coded signal generating means,
25

said first transmission means is operative to transmit said second coded moving picture sequence signal generated by said coded signal converting means,

said request signal receiving means is operative to receive said request signal indicative of a requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving
30 picture sequence signal being determined on the basis of said second coded moving picture sequence signal,

said separating coded signal extracting means is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal, and
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said second transmission means is operative to transmit said requested

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differential coded moving picture sequence signal extracted by said separating coded signal extracting means.

12. A coded signal separating apparatus as set forth in claim 11, in which
5 said request signal receiving means is operative to receive said request signal indicative of said requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of an edited second coded moving picture sequence signal generated by cutting and combining component parts of
10 said second coded moving picture sequence signal,
said separating coded signal extracting means is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal, and
said second transmission means is operative to transmit said requested
15 differential coded moving picture sequence signal extracted by said separating coded signal extracting means.
13. A coded signal separating apparatus as set forth in claim 10, in which
said separating storage means is operative to store said second coded moving
20 picture sequence signal generated by said coded signal converting means,
said first transmission means is operative to transmit said differential coded moving picture sequence signal generated by said differential coded signal generating means,
said request signal receiving means is operative to receive said request signal
25 indicative of said requested second coded moving picture sequence signal to be transmitted, said request signal indicative of said requested second coded moving picture sequence signal being determined on the basis of said differential coded moving picture sequence signal,
said separating coded signal extracting means is operative to extract said
30 requested second coded moving picture sequence signal from said separating storage means in response to said request signal, and
said second transmission means is operative to transmit said requested second coded moving picture sequence signal extracted by said separating coded signal extracting means.
35
14. A coded signal separating apparatus as set forth in claim 13, in which

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said first transmission means is operative to transmit said differential coded moving picture sequence signal by way of broadcasting.

15. A coded signal separating apparatus as set forth in claim 10, in which
5 said first transmission means is operative to transmit said first coded moving picture sequence signal,

said separating storage means is operative to store said differential coded moving picture sequence signal generated by said differential coded signal generating means,

10 said request signal receiving means is operative to receive said request signal indicative of a requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of a second coded moving picture sequence signal generated in accordance with said first coded moving picture sequence
15 signal,

said separating coded signal extracting means is operative to extract said requested differential coded moving picture sequence signal from said separating storage means in response to said request signal, and

20 said second transmission means is operative to transmit said requested differential coded moving picture sequence signal extracted by said separating coded signal extracting means.

16. A coded signal separating apparatus as set forth in claim 10, in which
25 said first transmission means is operative to transmit said first coded moving picture sequence signal,

said separating storage means is operative to store said second coded moving picture sequence signal generated by said coded signal converting means,

30 said request signal receiving means is operative to receive said request signal indicative of a requested second coded moving picture sequence signal to be transmitted, said request signal indicative of said requested second coded moving picture sequence signal being determined on the basis of a differential coded moving picture sequence signal generated in accordance with said first coded moving picture sequence signal,

said separating coded signal extracting means is operative to extract said requested second coded moving picture sequence signal from said separating storage
35 means in response to said request signal, and

said second transmission means is operative to transmit said requested second

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coded moving picture sequence signal extracted by said separating coded signal extracting means.

17. A coded signal merging apparatus for inputting a second coded moving picture sequence signal and a differential coded moving picture sequence signal to reconstruct a first coded moving picture sequence signal, said second coded moving picture sequence signal generated as a result of transcoding said first coded moving picture sequence signal and consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients, said differential coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal, said differential coded moving picture sequence signal including differential coefficient information between said first coefficient information and said second coefficient information, each of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks, said coded signal merging apparatus comprising:

first receiving means for receiving a base coded moving picture sequence signal, said base coded moving picture sequence signal being any one of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

merging storage means for storing said base coded moving picture sequence signal received by said first receiving means;

request signal determining means for determining a request signal for a requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored by said merging storage means;

request signal transmission means for transmitting said request signal for said requested coded moving picture sequence signal determined by said request signal determining means;

5 second receiving means for receiving said requested coded moving picture sequence signal;

merging coded signal extracting means for extracting said base coded moving picture sequence signal from said merging storage means;

merging means for merging said base coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal on the basis of said second coefficient information obtained from said series of second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal; and

15 outputting means for inputting said reconstructed first coded moving picture sequence signal from said merging means to be outputted therethrough.

18. A coded signal merging apparatus as set forth in claim 17, in which

20 said first receiving means is operative to receive said second coded moving picture sequence signal,

said merging storage means is operative to store said second coded moving picture sequence signal received by said first receiving means,

25 said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored by said merging storage means,

said request signal transmission means is operative to transmit a request signal for said requested differential coded moving picture sequence signal determined by said request signal determining means,

30 said second receiving means is operative to receive said requested differential coded moving picture sequence signal,

said merging coded signal extracting means is operative to extract said second coded moving picture sequence signal from said merging storage means, and

35 said merging means is operative to merge said second coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal.

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19. A coded signal merging apparatus as set forth in claim 18 further comprising second coded moving picture sequence signal decoding means for decoding said second coded moving picture sequence signal received by said first receiving means.

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20. A coded signal merging apparatus as set forth in claim 18 or claim 19 further comprising editing means for cutting and combining component parts of said second coded moving picture sequence signal stored by said merging storage means to generate an edited second coded moving picture sequence signal in a desired size, in which

10

said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said edited second coded moving picture sequence signal generated by said editing means,

said request signal transmission means is operative to transmit said request signal for said requested differential coded moving picture sequence signal determined

15

by said request signal determining means, and

said merging means is operative to merge said edited second coded moving picture sequence signal generated by said editing means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said desired size.

20

21. A coded signal merging apparatus as set forth in claim 17, in which

said first receiving means is operative to receive said differential coded moving picture sequence signal,

said merging storage means is operative to store said differential coded moving picture sequence signal received by said first receiving means,

25

request signal determining means is operative to determine a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said merging storage means,

30

said request signal transmission means is operative to transmit said request signal for said requested second coded moving picture sequence signal determined by said request signal determining means,

said second receiving means is operative to receive said requested second coded moving picture sequence signal,

35

said merging coded signal extracting means is operative to extract said differential coded moving picture sequence signal stored by said merging storage means,

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and

said merging means is operative to merge said differential coded moving picture sequence signal extracted by said merging coded signal extracting means with said second coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal.

22. A coded signal merging apparatus as set forth in claim 21, in which said first receiving means is operative to receive said differential coded moving picture sequence signal by way of broadcasting.

23. A coded signal merging apparatus as set forth in any one of claim 18, claim 19, and claim 22, further comprising reconstructed first coded signal storage means for storing said reconstructed first coded moving picture sequence signal reconstructed by said merging means.

24. A coded signal merging apparatus as set forth in claim 17 further comprising:
decoding means for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and
merging coded signal converting means for inputting said first coded moving picture sequence signal to generate said second coded moving picture sequence signal, in which

said first receiving means is operative to receive said first coded moving picture sequence signal,

said decoding means is operative to decode said first coded moving picture sequence signal received by said first receiving means,

said merging coded signal converting means is operative to input said first coded moving picture sequence signal received by said first receiving means to generate said second coded moving picture sequence signal,

said merging storage means is operative to store said second coded moving picture sequence signal generated by said merging coded signal converting means,

said request signal determining means is operative to determine a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored by said merging storage means,

said request signal transmission means is operative to transmit said request signal for said requested differential coded moving picture sequence signal determined by said request signal determining means,

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said second receiving means is operative to receive said requested differential coded moving picture sequence signal,

said merging coded signal extracting means is operative to extract said second coded moving picture sequence signal from said merging storage means, and

5 said merging means is operative to merge said second coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested differential coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said desired size.

10

25. A coded signal merging apparatus as set forth in claim 17 further comprising:
 decoding means for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

15 merging differential coded signal generating means for inputting said first coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

 said first receiving means is operative to receive said first coded moving picture sequence signal,

20 said decoding means is operative to decode said first coded moving picture sequence signal received by said first receiving means,

 said merging differential coded signal generating means is operative to input said first coded moving picture sequence signal received by said first receiving means to generate said differential coded moving picture sequence signal,

25 said merging storage means is operative to store said differential coded moving picture sequence signal generated by said merging coded signal converting means,

 said request signal determining means is operative to determine a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said merging storage means,

30 said request signal transmission means is operative to transmit said request signal for said requested second coded moving picture sequence signal determined by said request signal determining means,

 said second receiving means is operative to receive said requested second coded moving picture sequence signal,

35 said merging coded signal extracting means is operative to extract said differential coded moving picture sequence signal from said merging storage means,

and

5 said merging means is operative to merge said differential coded moving picture sequence signal extracted by said merging coded signal extracting means with said requested second coded moving picture sequence signal received by said second receiving means to reconstruct said first coded moving picture sequence signal in said desired size.

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Claims 26-31 are cancelled

- 5 32. A coded signal separating and merging method comprising the steps of:
- (a) inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal; and
- (b) inputting said second coded moving picture sequence signal and said differential coded moving picture sequence signal to reconstruct said first coded moving picture sequence signal.
- 10 said step (a) including the steps of:
- (a-1) inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients;
- 15 (a-2) converting said first coded moving picture sequence signal inputted in said step (a-1) to generate said second coded moving picture sequence signal, said second coded moving picture sequence signal consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks;
- 20 (a-3) inputting said first coded moving picture sequence signal and said second coded moving picture sequence signal to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal, and said second coefficient information obtained from said series of said second picture information of said second coded moving picture sequence signal, said differential
- 25
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- coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal;
- (a-4) selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal; and
- 5 (a-5) selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal to said step (b);
- said step (b) including the steps of:
- 10 (b-1) receiving a base coded moving picture sequence signal transmitted in said step (a-5), said base coded moving picture sequence signal being any one of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;
- (b-2) storing said base coded moving picture sequence signal received in said step
- 15 (b-1);
- (b-3) determining a request signal for a requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored in said step (b-2); and
- (b-4) transmitting said request signal for said requested coded moving picture sequence signal determined in said step (b-3) to said step (a);
- 20 whereby said step (a) further includes the steps of:
- (a-6) receiving said request signal transmitted in said step (b-4);
- (a-7) extracting said requested coded moving picture sequence signal in response to said request signal; and
- 25 (a-8) transmitting said requested coded moving picture sequence signal extracted in said step (a-7) to said step (b);
- said step (b) includes the steps of:
- (b-5) receiving said requested coded moving picture sequence signal transmitted in said step (a-8);
- 30 (b-6) extracting said base coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2);
- (b-7) merging said base coded moving picture sequence signal extracted in said step (b-6) with said requested coded moving picture sequence signal received in said step (b-5) on the basis of said second coefficient information obtained from said series of
- 35 second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal to

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reconstruct said first coded moving picture sequence signal; and
(b-8) inputting said reconstructed first coded moving picture sequence signal generated in said step (b-7) to be outputted therethrough.

- 5 33. A coded signal separating and merging method as set forth in claim 32, in which

said step (a-4) has the step of storing said differential coded moving picture sequence signal generated in said step (a-3),

- 10 said step (a-5) has the step of transmitting said second coded moving picture sequence signal generated in said step (a-2),

said step (b-1) has the step of receiving said second coded moving picture sequence signal transmitted in said step (a-5),

said step (b-2) has the step of storing said second coded moving picture sequence signal received in said step (b-1),

- 15 said step (b-3) has the step of determining a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored in said step (b-2),

said step (b-4) has the step of transmitting said request signal for said requested differential coded moving picture sequence signal determined in said step (b-3),

- 20 said step (a-6) has the step of receiving said request signal transmitted in said step (b-4),

said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal,

- 25 said step (a-8) has the step of transmitting said requested differential coded moving picture sequence signal extracted in said step (a-7) to said step (b),

said step (b-5) has the step of receiving said requested differential coded moving picture sequence signal transmitted in said step (a-8),

- 30 said step (b-6) has the step of extracting said second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2), and

- said step (b-7) has the step of merging said second coded moving picture sequence signal extracted in said step (b-6) with said requested differential coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal.
- 35

34. A coded signal separating and merging method as set forth in claim 33, in which

said step (b) further includes the step of decoding said second coded moving picture sequence signal received in said step (b-1).

5

35. A coded signal separating and merging method as set forth in claim 33 or claim 34, in which

said step (b) further includes the step of (b-9) cutting and combining component parts of said second coded moving picture sequence signal stored in said step (b-2) to generate an edited second coded moving picture sequence signal in a desired size,

10

said step (b-3) has the step of determining a request signal for a requested differential coded moving picture sequence signal on the basis of said edited second coded moving picture sequence signal generated in said step (b-9),

15

said step (b-4) has the step of transmitting said request signal for said requested differential coded moving picture sequence signal determined in said step (b-3) to said step (a),

said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

20

said step (b-7) has the step of merging said edited second coded moving picture sequence signal generated in said step (b-9) with said requested differential coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

25

36. A coded signal separating and merging method as set forth in claim 32, in which

said step (a-4) has the step of storing said second coded moving picture sequence signal generated in said step (a-2),

30

said step (a-5) has the step of transmitting said differential coded moving picture sequence signal generated in said step (a-3) to said step (b),

said step (b-1) has the step of receiving said differential coded moving picture sequence signal transmitted in said step (a-5),

said step (b-2) has the step of storing said differential coded moving picture sequence signal received in said step (b-1),

35

step (b-3) has the step of determining a request signal for a requested second

coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored in said step (b-2),

said step (b-4) has the step of transmitting said request signal for said requested second coded moving picture sequence signal determined in said step (b-3),

5 said step (a-6) has the step of receiving said request signal transmitted in said step (b-4),

said step (a-7) has the step of extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal,

10 said step (a-8) has the step of transmitting said requested second coded moving picture sequence signal extracted in said step (a-7) to said step (b),

said step (b-5) has the step of receiving said requested second coded moving picture sequence signal transmitted in said step (a-8),

15 said step (b-6) has the step of extracting said differential coded moving picture sequence signal stored in said step (b-2), and

said step (b-7) has the step of merging said differential coded moving picture sequence signal extracted in said step (b-6) with said second coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal.

20 37. A coded signal separating and merging method as set forth in claim 36, in which

said step (a-5) has the step of transmitting said differential coded moving picture sequence signal by way of broadcasting.

25 38. A coded signal separating and merging method as set forth in any one of claim 33, claim 34 and claim 37, in which

said step (b) further includes the step of storing said reconstructed first coded moving picture sequence signal reconstructed in said step (b-7).

30 39. A coded signal separating and merging method as set forth in claim 32, in which

said step (b) further includes the steps of:

35 (b-10) decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

(b-11) inputting said first coded moving picture sequence signal to generate said

second coded moving picture sequence signal,

said step (a-5) has the step of transmitting said first coded moving picture sequence signal,

5 said step (a-4) has the step of storing said differential coded moving picture sequence signal generated in said step (a-3),

said step (b-1) has the step of receiving said first coded moving picture sequence signal transmitted in said step (a-5),

said step (b-10) has the step of decoding said first coded moving picture sequence signal received in said step (b-1),

10 said step (b-11) has the step of inputting said first coded moving picture sequence signal received in said step (b-1) to generate said second coded moving picture sequence signal,

said step (b-2) has the step of storing said second coded moving picture sequence signal generated in said step (b-11),

15 said step (b-3) has the step of determining a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored in said step (b-2),

20 said step (b-4) has the step of transmitting said request signal for said requested differential coded moving picture sequence signal determined in said step (b-3) to said step (a),

said step (a-6) has the step of receiving said request signal transmitted in said step (b-4),

25 said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal,

said step (a-8) has the step of transmitting said requested differential coded moving picture sequence signal extracted in said step (a-7) to said step (b),

said step (b-5) has the step of receiving said requested differential coded moving picture sequence signal transmitted in said step (a-8),

30 said step (b-6) has the step of extracting said second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2), and

35 said step (b-7) has the step of merging said second coded moving picture sequence signal extracted in said step (b-6) with said requested differential coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

40. A coded signal separating and merging method as set forth in claim 32, in which

said step (b) further includes the steps of:

5 (b-10) decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

(b-12) inputting said first coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

10 said step (a-5) has the step of transmitting said first coded moving picture sequence signal,

said step (a-4) has the step of storing said second coded moving picture sequence signal generated in said step (a-2),

said step (b-1) has the step of receiving said first coded moving picture sequence signal transmitted in said step (a-5),

15 said step (b-10) has the step of decoding said first coded moving picture sequence signal received in said step (b-1),

said step (b-12) has the step of inputting said first coded moving picture sequence signal received in said step (b-1) to generate said differential coded moving picture sequence signal,

20 said step (b-2) has the step of storing said differential coded moving picture sequence signal generated in said step (b-11),

said step (b-3) has the step of determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored in said step (b-2),

25 said step (b-4) has the step of transmitting said request signal for said requested second coded moving picture sequence signal determined in said step (b-3) to said step (a),

said step (a-6) has the step of receiving said request signal transmitted in said step (b-4),

30 said step (a-7) has the step of extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal,

said step (a-8) has the step of transmitting said requested second coded moving picture sequence signal extracted in said step (a-7) to said step (b),

35 said step (b-5) has the step of receiving said requested second coded moving picture sequence signal transmitted in said step (a-8),

said step (b-6) has the step of extracting said differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2), and

said step (b-7) has the step of merging said differential coded moving picture sequence signal extracted in said step (b-6) with said requested second coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

41. A coded signal separating method for inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal comprising the steps of:

(a-1) inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients;

(a-2) converting said first coded moving picture sequence signal inputted in said step (a-1) to generate said second coded moving picture sequence signal, said second coded moving picture sequence signal consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks;

(a-3) inputting said first coded moving picture sequence signal and said second coded moving picture sequence signal from said step (a-2) to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal, and said second coefficient information obtained from said series of said second picture information of said second coded moving picture sequence signal, said differential coded moving picture sequence signal being a difference between said

first coded moving picture sequence signal and said second coded moving picture sequence signal;

(a-4) selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

(a-5) selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

(a-6) receiving a request signal indicative of a requested coded moving picture sequence signal to be transmitted, said request signal indicative of said requested coded moving picture sequence signal being determined on the basis of said first coded moving picture sequence signal, said second coded moving picture sequence signal, or said differential coded moving picture sequence signal;

(a-7) extracting said requested coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal; and

(a-8) transmitting said requested coded moving picture sequence signal extracted in said step (a-7).

42. A coded signal separating method as set forth in claim 41, in which said step (a-4) has the step of storing said differential coded moving picture sequence signal generated in said step (a-3),

said step (a-5) has the step of transmitting said second coded moving picture sequence signal generated in said step (a-2),

said step (a-6) has the step of receiving said request signal indicative of a requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of said second coded moving picture sequence signal,

said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

said step (a-8) has the step of transmitting said requested differential coded moving picture sequence signal extracted in said step (a-7).

43. A coded signal separating method as set forth in claim 42, in which

said step (a-6) has the step of receiving said request signal indicative of said requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of an edited second coded moving picture sequence signal generated by cutting and combining component parts of said second coded moving picture sequence signal,

said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

said step (a-8) has the step of transmitting said requested differential coded moving picture sequence signal extracted in said step (a-7).

44. A coded signal separating method as set forth in claim 41, in which

said step (a-4) has the step of storing said second coded moving picture sequence signal generated in said step (a-2),

said step (a-5) has the step of transmitting said differential coded moving picture sequence signal generated in said step (a-3),

said step (a-6) has the step of receiving said request signal indicative of said requested second coded moving picture sequence signal to be transmitted, said request signal indicative of said requested second coded moving picture sequence signal being determined on the basis of said differential coded moving picture sequence signal,

said step (a-7) has the step of extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

said step (a-8) has the step of transmitting said requested second coded moving picture sequence signal extracted in said step (a-7).

45. A coded signal separating method as set forth in claim 44, in which

said step (a-5) has the step of transmitting said differential coded moving picture sequence signal by way of broadcasting.

46. A coded signal separating method as set forth in claim 41, in which

said step (a-5) has the step of transmitting said first coded moving picture sequence signal,

said step (a-4) has the step of storing said differential coded moving picture sequence signal generated in said step (a-3),

said step (a-6) has the step of receiving said request signal indicative of a requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of a second coded moving picture sequence signal generated in accordance with said first coded moving picture sequence signal,

said step (a-7) has the step of extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

said step (a-8) has the step of transmitting said requested differential coded moving picture sequence signal extracted in said step (a-7).

47. A coded signal separating method as set forth in claim 41, in which

said step (a-5) has the step of transmitting said first coded moving picture sequence signal,

said step (a-4) has the step of storing said second coded moving picture sequence signal generated in said step (a-2),

said step (a-6) has the step of receiving said request signal indicative of a requested second coded moving picture sequence signal to be transmitted, said request signal indicative of said requested second coded moving picture sequence signal being determined on the basis of a differential coded moving picture sequence signal generated in accordance with said first coded moving picture sequence signal,

said step (a-7) has the step of extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (a-4) in response to said request signal, and

said step (a-8) has the step of transmitting said requested second coded moving picture sequence signal extracted in said step (a-7).

48. A coded signal merging method for inputting a second coded moving picture sequence signal and a differential coded moving picture sequence signal to reconstruct a first coded moving picture sequence signal, said second coded moving picture sequence signal generated as a result of transcoding said first coded moving picture sequence signal and consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient

information including a matrix of first coefficients, said differential coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal, said differential coded moving picture sequence signal including differential coefficient information between said first coefficient information and said second coefficient information, each of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks, said step (b) comprising the steps of:

- (b-1) receiving a base coded moving picture sequence signal, said base coded moving picture sequence signal being any one of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;
- (b-2) storing said base coded moving picture sequence signal received in said step (b-1);
- (b-3) determining a request signal for a requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored in said step (b-2);
- (b-4) transmitting said request signal for said requested coded moving picture sequence signal determined in said step (b-3);
- (b-5) receiving said requested coded moving picture sequence signal;
- (b-6) extracting said base coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2);
- (b-7) merging said base coded moving picture sequence signal extracted in said step (b-6) with said requested coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal on the basis of said second coefficient information obtained from said series of second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal; and
- (b-8) inputting said reconstructed first coded moving picture sequence signal generated in said step (b-7) to be outputted therethrough.

49. A coded signal merging method as set forth in claim 48, in which
said step (b-1) has the step of receiving said second coded moving picture
sequence signal,

5 said step (b-2) has the step of storing said second coded moving picture
sequence signal received in said step (b-1),

said step (b-3) has the step of determining a request signal for a requested
differential coded moving picture sequence signal on the basis of said second coded
moving picture sequence signal stored in said step (b-2),

10 said step (b-4) has the step of transmitting a request signal for said requested
differential coded moving picture sequence signal determined in said step (b-3),

said step (b-5) has the step of receiving said requested differential coded
moving picture sequence signal,

15 said step (b-6) has the step of extracting said second coded moving picture
sequence signal from among coded moving picture sequence signals stored in said step
(b-2), and

20 said step (b-7) has the step of merging said second coded moving picture
sequence signal extracted in said step (b-6) with said requested differential coded
moving picture sequence signal received in said step (b-5) to reconstruct said first coded
moving picture sequence signal.

50. A coded signal merging method as set forth in claim 49 further comprising the
step of decoding said second coded moving picture sequence signal received in said step
(b-1).

25 51. A coded signal merging method as set forth in claim 49 or claim 50 further
comprising the step of (b-9) cutting and combining component parts of said second
coded moving picture sequence signal stored in said step (b-2) to generate an edited
second coded moving picture sequence signal in a desired size, in which

30 said step (b-3) has the step of determining a request signal for a requested
differential coded moving picture sequence signal on the basis of said edited second
coded moving picture sequence signal generated in said step (b-9),

said step (b-4) has the step of transmitting said request signal for said requested
differential coded moving picture sequence signal determined in said step (b-3), and

35 said step (b-7) has the step of merging said edited second coded moving picture
sequence signal generated in said editing step (b-9) with said requested differential

coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

52. A coded signal merging method as set forth in claim 48, in which

5 said step (b-1) has the step of receiving said differential coded moving picture sequence signal,

said step (b-2) has the step of storing said differential coded moving picture sequence signal received in said step (b-1),

10 step (b-3) has the step of determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored in said step (b-2),

said step (b-4) has the step of transmitting said request signal for said requested second coded moving picture sequence signal determined in said step (b-3),

15 said step (b-5) has the step of receiving said requested second coded moving picture sequence signal,

said step (b-6) has the step of extracting said differential coded moving picture sequence signal stored in said step (b-2), and

20 said step (b-7) has the step of merging said differential coded moving picture sequence signal extracted in said step (b-6) with said second coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal.

53. A coded signal merging method as set forth in claim 52, in which

25 said step (b-1) has the step of receiving said differential coded moving picture sequence signal by way of broadcasting.

54. A coded signal merging method as set forth in any one of claim 49, claim 50, and claim 53, further comprising the step of storing said reconstructed first coded moving picture sequence signal reconstructed in said step (b-7).

55. A coded signal merging method as set forth in claim 48 further comprising the steps of:

(b-10) decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

35 (b-11) inputting said first coded moving picture sequence signal to generate said second coded moving picture sequence signal, in which

said step (b-1) has the step of receiving said first coded moving picture sequence signal,

said step (b-10) has the step of decoding said first coded moving picture sequence signal received in said step (b-1),

5 said step (b-11) has the step of inputting said first coded moving picture sequence signal received in said step (b-1) to generate said second coded moving picture sequence signal,

said step (b-2) has the step of storing said second coded moving picture sequence signal generated in said step (b-11),

10 said step (b-3) has the step of determining a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal stored in said step (b-2),

said step (b-4) has the step of transmitting said request signal for said requested differential coded moving picture sequence signal determined in said step (b-3),

15 said step (b-5) has the step of receiving said requested differential coded moving picture sequence signal,

said step (b-6) has the step of extracting said second coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2), and

20 said step (b-7) has the step of merging said second coded moving picture sequence signal extracted in said step (b-6) with said requested differential coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

25 56. A coded signal merging method as set forth in claim 48 further comprising the steps of:

(b-10) decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

30 (b-12) inputting said first coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

said step (b-1) has the step of receiving said first coded moving picture sequence signal,

said step (b-10) has the step of decoding said first coded moving picture sequence signal received in said step (b-1),

35 said step (b-12) has the step of inputting said first coded moving picture sequence signal received in said step (b-1) to generate said differential coded moving

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picture sequence signal,

said step (b-2) has the step of storing said differential coded moving picture sequence signal generated in said step (b-11),

- 5 said step (b-3) has the step of determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored in said step (b-2),

said step (b-4) has the step of transmitting said request signal for said requested second coded moving picture sequence signal determined in said step (b-3),

- 10 said step (b-5) has the step of receiving said requested second coded moving picture sequence signal,

said step (b-6) has the step of extracting said differential coded moving picture sequence signal from among coded moving picture sequence signals stored in said step (b-2), and

- 15 said step (b-7) has the step of merging said differential coded moving picture sequence signal extracted in said step (b-6) with said requested second coded moving picture sequence signal received in said step (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

Claims 57-62 are cancelled

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63. A computer program product comprising a computer usable storage medium having computer readable code embodied therein for separating and merging a coded signal comprising:

- 10 (a) computer readable program code for inputting for inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal; and
 - (b) computer readable program code for inputting said second coded moving picture sequence signal and said differential coded moving picture sequence signal to
 - 15 reconstruct said first coded moving picture sequence signal.
- said computer readable program code (a) including:
- (a-1) computer readable program code for inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a
 - 20 series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients;
 - (a-2) computer readable program code for converting said first coded moving picture sequence signal inputted by said computer readable program code (a-1) to generate said second coded moving picture sequence signal, said second coded moving picture
 - 25 sequence signal consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing
 - 30 common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect
 - 35 to one of said blocks;
 - (a-3) computer readable program code for inputting said first coded moving picture

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- sequence signal and said second coded moving picture sequence signal to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal, and said second coefficient information obtained from
- 5 said series of said second picture information of said second coded moving picture sequence signal, said differential coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal;
- (a-4) computer readable program code for selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said
- 10 differential coded moving picture sequence signal; and
- (a-5) computer readable program code for selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal to said computer readable
- 15 program code (b);
- said computer readable program code (b) including:
- (b-1) computer readable program code for receiving a base coded moving picture sequence signal transmitted by said computer readable program code (a-5), said base coded moving picture sequence signal being any one of said first coded moving picture
- 20 sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;
- (b-2) computer readable program code for storing said base coded moving picture sequence signal received by said computer readable program code (b-1);
- (b-3) computer readable program code for determining a request signal for a
- 25 requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored by said computer readable program code (b-2); and
- (b-4) computer readable program code for transmitting said request signal for said requested coded moving picture sequence signal determined by said computer readable program code (b-3) to said computer readable program code (a);
- 30 whereby said computer readable program code (a) further includes:
- (a-6) computer readable program code for receiving said request signal transmitted by said computer readable program code (b-4);
- (a-7) computer readable program code for extracting said requested coded moving picture sequence signal in response to said request signal; and
- 35 (a-8) computer readable program code for transmitting said requested coded moving picture sequence signal extracted by said computer readable program code (a-7) to said

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computer readable program code (b);

said computer readable program code (b) includes:

- (b-5) computer readable program code for receiving said requested coded moving picture sequence signal transmitted by said computer readable program code (a-8);
- 5 (b-6) computer readable program code for extracting said base coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2);
- (b-7) computer readable program code for merging said base coded moving picture sequence signal extracted by said computer readable program code (b-6) with said
- 10 requested coded moving picture sequence signal received by said computer readable program code (b-5) on the basis of said second coefficient information obtained from said series of second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal to reconstruct said first coded moving picture sequence signal; and
- 15 (b-8) computer readable program code for inputting said reconstructed first coded moving picture sequence signal generated by said computer readable program code (b-7) to be outputted therethrough.

64. A computer program product as set forth in claim 63, in which
- 20 said computer readable program code (a-4) has computer readable program code for storing said differential coded moving picture sequence signal generated by said computer readable program code (a-3),
- said computer readable program code (a-5) has computer readable program code for transmitting said second coded moving picture sequence signal generated by
- 25 said computer readable program code (a-2),
- said computer readable program code (b-1) has computer readable program code for receiving said second coded moving picture sequence signal transmitted by said computer readable program code (a-5),
- said computer readable program code (b-2) has computer readable program
- 30 code for storing said second coded moving picture sequence signal received by said computer readable program code (b-1),
- said computer readable program code (b-3) has computer readable program code for determining a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal
- 35 stored by said computer readable program code (b-2),
- said computer readable program code (b-4) has computer readable program

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code for transmitting said request signal for said requested differential coded moving picture sequence signal determined by said computer readable program code (b-3),

5 said computer readable program code (a-6) has computer readable program code for receiving said request signal transmitted by said computer readable program code (b-4),

 said computer readable program code (a-7) has computer readable program code for extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal,

10 said computer readable program code (a-8) has computer readable program code for transmitting said requested differential coded moving picture sequence signal extracted by said computer readable program code (a-7) to said computer readable program code (b),

 said computer readable program code (b-5) has computer readable program code for receiving said requested differential coded moving picture sequence signal transmitted by said computer readable program code (a-8),

15 said computer readable program code (b-6) has computer readable program code for extracting said second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2), and

20 said computer readable program code (b-7) has computer readable program code for merging said second coded moving picture sequence signal extracted by said computer readable program code (b-6) with said requested differential coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal.

65. A computer program product as set forth in claim 64, in which
 said computer readable program code (b) further includes computer readable program code for decoding said second coded moving picture sequence signal received
30 by said computer readable program code (b-1).

66. A computer program product as set forth in claim 64 or claim 65, in which
 said computer readable program code (b) further includes a (b-9) computer readable program code for cutting and combining component parts of said second coded
35 moving picture sequence signal stored by said computer readable program code (b-2) to generate an edited second coded moving picture sequence signal in a desired size.

said computer readable program code (b-3) has computer readable program code for determining a request signal for a requested differential coded moving picture sequence signal on the basis of said edited second coded moving picture sequence signal generated by said computer readable program code (b-9),

5 said computer readable program code (b-4) has computer readable program code for transmitting said request signal for said requested differential coded moving picture sequence signal determined by said computer readable program code (b-3) to said computer readable program code (a),

10 said computer readable program code (a-7) has computer readable program code for extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal, and

15 said computer readable program code (b-7) has computer readable program code for merging said edited second coded moving picture sequence signal generated by said computer readable program code (b-9) with said requested differential coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

67. A computer program product as set forth in claim 63, in which

20 said computer readable program code (a-4) has computer readable program code for storing said second coded moving picture sequence signal generated by said computer readable program code (a-2),

25 said computer readable program code (a-5) has computer readable program code for transmitting said differential coded moving picture sequence signal generated by said computer readable program code (a-3) to said computer readable program code (b),

 said computer readable program code (b-1) has computer readable program code for receiving said differential coded moving picture sequence signal transmitted by said computer readable program code (a-5),

30 said computer readable program code (b-2) has computer readable program code for storing said differential coded moving picture sequence signal received by said computer readable program code (b-1),

35 computer readable program code (b-3) has computer readable program code for determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said computer readable program code (b-2),

said computer readable program code (b-4) has computer readable program code for transmitting said request signal for said requested second coded moving picture sequence signal determined by said computer readable program code (b-3),

5 said computer readable program code (a-6) has computer readable program code for receiving said request signal transmitted by said computer readable program code (b-4),

10 said computer readable program code (a-7) has computer readable program code for extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal,

 said computer readable program code (a-8) has computer readable program code for transmitting said requested second coded moving picture sequence signal extracted by said computer readable program code (a-7) to said computer readable program code (b),

15 said computer readable program code (b-5) has computer readable program code for receiving said requested second coded moving picture sequence signal transmitted by said computer readable program code (a-8),

20 said computer readable program code (b-6) has computer readable program code for extracting said differential coded moving picture sequence signal stored by said computer readable program code (b-2), and

25 said computer readable program code (b-7) has computer readable program code for merging said differential coded moving picture sequence signal extracted by said computer readable program code (b-6) with said second coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal.

68. A computer program product as set forth in claim 67, in which

30 said computer readable program code (a-5) has computer readable program code for transmitting said differential coded moving picture sequence signal by way of broadcasting.

69. A computer program product as set forth in any one of claim 64, claim 65, and claim 68, in which

35 said computer readable program code (b) further includes computer readable program code for storing said reconstructed first coded moving picture sequence signal reconstructed by said computer readable program code (b-7).

70. A computer program product as set forth in claim 63, in which
said computer readable program code (b) further includes:

(b-10) computer readable program code for decoding said first coded moving picture
sequence signal or said second coded moving picture sequence signal; and

(b-11) computer readable program code for inputting said first coded moving picture
sequence signal to generate said second coded moving picture sequence signal,

said computer readable program code (a-5) has computer readable program
code for transmitting said first coded moving picture sequence signal,

said computer readable program code (a-4) has computer readable program
code for storing said differential coded moving picture sequence signal generated by
said computer readable program code (a-3),

said computer readable program code (b-1) has computer readable program
code for receiving said first coded moving picture sequence signal transmitted by said
computer readable program code (a-5),

said computer readable program code (b-10) has computer readable program
code for decoding said first coded moving picture sequence signal received by said
computer readable program code (b-1),

said computer readable program code (b-11) has computer readable program
code for inputting said first coded moving picture sequence signal received by said
computer readable program code (b-1) to generate said second coded moving picture
sequence signal,

said computer readable program code (b-2) has computer readable program
code for storing said second coded moving picture sequence signal generated by said
computer readable program code (b-11),

said computer readable program code (b-3) has computer readable program
code for determining a request signal for a requested differential coded moving picture
sequence signal on the basis of said second coded moving picture sequence signal
stored by said computer readable program code (b-2),

said computer readable program code (b-4) has computer readable program
code for transmitting said request signal for said requested differential coded moving
picture sequence signal determined by said computer readable program code (b-3) to
said computer readable program code (a),

said computer readable program code (a-6) has computer readable program
code for receiving said request signal transmitted by said computer readable program
code (b-4),

said computer readable program code (a-7) has computer readable program code for extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal,

5 said computer readable program code (a-8) has computer readable program code for transmitting said requested differential coded moving picture sequence signal extracted by said computer readable program code (a-7) to said computer readable program code (b),

10 said computer readable program code (b-5) has computer readable program code for receiving said requested differential coded moving picture sequence signal transmitted by said computer readable program code (a-8),

said computer readable program code (b-6) has computer readable program code for extracting said second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2), and

said computer readable program code (b-7) has computer readable program code for merging said second coded moving picture sequence signal extracted by said computer readable program code (b-6) with said requested differential coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

71. A computer program product as set forth in claim 63, in which said computer readable program code (b) further includes:

25 (b-10) computer readable program code for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and
(b-12) computer readable program code for inputting said first coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

said computer readable program code (a-5) has computer readable program code for transmitting said first coded moving picture sequence signal,

30 said computer readable program code (a-4) has computer readable program code for storing said second coded moving picture sequence signal generated by said computer readable program code (a-2),

said computer readable program code (b-1) has computer readable program code for receiving said first coded moving picture sequence signal transmitted by said
35 computer readable program code (a-5),

said computer readable program code (b-10) has computer readable program

code for decoding said first coded moving picture sequence signal received by said computer readable program code (b-1),

5 said computer readable program code (b-12) has computer readable program code for inputting said first coded moving picture sequence signal received by said computer readable program code (b-1) to generate said differential coded moving picture sequence signal,

 said computer readable program code (b-2) has computer readable program code for storing said differential coded moving picture sequence signal generated by said computer readable program code (b-11),

10 said computer readable program code (b-3) has computer readable program code for determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said computer readable program code (b-2),

15 said computer readable program code (b-4) has computer readable program code for transmitting said request signal for said requested second coded moving picture sequence signal determined by said computer readable program code (b-3) to said computer readable program code (a),

20 said computer readable program code (a-6) has computer readable program code for receiving said request signal transmitted by said computer readable program code (b-4),

 said computer readable program code (a-7) has computer readable program code for extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal,

25 said computer readable program code (a-8) has computer readable program code for transmitting said requested second coded moving picture sequence signal extracted by said computer readable program code (a-7) to said computer readable program code (b),

30 said computer readable program code (b-5) has computer readable program code for receiving said requested second coded moving picture sequence signal transmitted by said computer readable program code (a-8),

 said computer readable program code (b-6) has computer readable program code for extracting said differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2), and

35 said computer readable program code (b-7) has computer readable program

code for merging said differential coded moving picture sequence signal extracted by said computer readable program code (b-6) with said requested second coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

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72. A computer program product comprising a computer usable storage medium having computer readable code embodied therein for inputting a first coded moving picture sequence signal to separate into a second coded moving picture sequence signal and a differential coded moving picture sequence signal comprising:

- 10 (a-1) computer readable program code for inputting said first coded moving picture sequence signal therethrough, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients;
- 15 (a-2) computer readable program code for converting said first coded moving picture sequence signal inputted by said computer readable program code (a-1) to generate said second coded moving picture sequence signal, said second coded moving picture sequence signal consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of
- 20 second coefficients, each of said first coded moving picture sequence signal, and said second coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice
- 25 layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks;
- 30 (a-3) computer readable program code for inputting said first coded moving picture sequence signal and said second coded moving picture sequence signal from said computer readable program code (a-2) to generate a differential coded moving picture sequence signal on the basis of said first coefficient information obtained from said series of first picture information of said first coded moving picture sequence signal, and said second coefficient information obtained from said series of said second picture
- 35 information of said second coded moving picture sequence signal, said differential coded moving picture sequence signal being a difference between said first coded

moving picture sequence signal and said second coded moving picture sequence signal;
 (a-4) computer readable program code for selectively storing said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

5 (a-5) computer readable program code for selectively transmitting said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

(a-6) computer readable program code for receiving a request signal indicative of a requested coded moving picture sequence signal to be transmitted, said request signal
 10 indicative of said requested coded moving picture sequence signal being determined on the basis of said first coded moving picture sequence signal, said second coded moving picture sequence signal, or said differential coded moving picture sequence signal;

(a-7) computer readable program code for extracting said requested coded moving picture sequence signal from among coded moving picture sequence signals stored by
 15 said computer readable program code (a-4) in response to said request signal; and

(a-8) computer readable program code for transmitting said requested coded moving picture sequence signal extracted by said computer readable program code (a-7).

73. A computer program product as set forth in claim 72, in which

20 said computer readable program code (a-4) has computer readable program code for storing said differential coded moving picture sequence signal generated by said computer readable program code (a-3),

said computer readable program code (a-5) has computer readable program code for transmitting said second coded moving picture sequence signal generated by
 25 said computer readable program code (a-2),

said computer readable program code (a-6) has computer readable program code for receiving said request signal indicative of a requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the
 30 basis of said second coded moving picture sequence signal,

said computer readable program code (a-7) has computer readable program code for extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal, and

35 said computer readable program code (a-8) has computer readable program code for transmitting said requested differential coded moving picture sequence signal

extracted by said computer readable program code (a-7).

74. A computer program product as set forth in claim 73, in which

said computer readable program code (a-6) has computer readable program code for receiving said request signal indicative of said requested differential coded moving picture sequence signal to be transmitted, said request signal indicative of said requested differential coded moving picture sequence signal being determined on the basis of an edited second coded moving picture sequence signal generated by cutting and combining component parts of said second coded moving picture sequence signal,

said computer readable program code (a-7) has computer readable program code for extracting said requested differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal, and

said computer readable program code (a-8) has computer readable program code for transmitting said requested differential coded moving picture sequence signal extracted by said computer readable program code (a-7).

75. A computer program product as set forth in claim 72, in which

said computer readable program code (a-4) has computer readable program code for storing said second coded moving picture sequence signal generated by said computer readable program code (a-2),

said computer readable program code (a-5) has computer readable program code for transmitting said differential coded moving picture sequence signal generated by said computer readable program code (a-3),

said computer readable program code (a-6) has computer readable program code for receiving said request signal indicative of said requested second coded moving picture sequence signal to be transmitted, said request signal indicative of said requested second coded moving picture sequence signal being determined on the basis of said differential coded moving picture sequence signal,

said computer readable program code (a-7) has computer readable program code for extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal, and

said computer readable program code (a-8) has computer readable program code for transmitting said requested second coded moving picture sequence signal extracted by said computer readable program code (a-7).

76. A computer program product as set forth in claim 75, in which
said computer readable program code (a-5) has computer readable program
code for transmitting said differential coded moving picture sequence signal by way of
5 broadcasting.

77. A computer program product as set forth in claim 72, in which
said computer readable program code (a-5) has computer readable program
code for transmitting said first coded moving picture sequence signal,

10 said computer readable program code (a-4) has computer readable program
code for storing said differential coded moving picture sequence signal generated by
said computer readable program code (a-3),

15 said computer readable program code (a-6) has computer readable program
code for receiving said request signal indicative of a requested differential coded
moving picture sequence signal to be transmitted, said request signal indicative of said
requested differential coded moving picture sequence signal being determined on the
basis of a second coded moving picture sequence signal generated in accordance with
said first coded moving picture sequence signal,

20 said computer readable program code (a-7) has computer readable program
code for extracting said requested differential coded moving picture sequence signal
from among coded moving picture sequence signals stored by said computer readable
program code (a-4) in response to said request signal, and

25 said computer readable program code (a-8) has computer readable program
code for transmitting said requested differential coded moving picture sequence signal
extracted by said computer readable program code (a-7).

78. A computer program product as set forth in claim 72, in which
said computer readable program code (a-5) has computer readable program
code for transmitting said first coded moving picture sequence signal,

30 said computer readable program code (a-4) has computer readable program
code for storing said second coded moving picture sequence signal generated by said
computer readable program code (a-2),

35 said computer readable program code (a-6) has computer readable program
code for receiving said request signal indicative of a requested second coded moving
picture sequence signal to be transmitted, said request signal indicative of said requested
second coded moving picture sequence signal being determined on the basis of a

differential coded moving picture sequence signal generated in accordance with said first coded moving picture sequence signal,

said computer readable program code (a-7) has computer readable program code for extracting said requested second coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (a-4) in response to said request signal, and

said computer readable program code (a-8) has computer readable program code for transmitting said requested second coded moving picture sequence signal extracted by said computer readable program code (a-7).

79. A computer program product comprising a computer usable storage medium having computer readable code embodied therein for inputting a second coded moving picture sequence signal and a differential coded moving picture sequence signal to reconstruct a first coded moving picture sequence signal, said second coded moving picture sequence signal generated as a result of transcoding said first coded moving picture sequence signal and consisting of a series of second picture information having second coefficient information, said second coefficient information including a matrix of second coefficients, said first coded moving picture sequence signal generated as a result of encoding original moving picture sequence signal and consisting of a series of first picture information having first coefficient information, said first coefficient information including a matrix of first coefficients, said differential coded moving picture sequence signal being a difference between said first coded moving picture sequence signal and said second coded moving picture sequence signal, said differential coded moving picture sequence signal including differential coefficient information between said first coefficient information and said second coefficient information, each of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal is in the form of a hierarchical structure including one or more sequence layers each having a plurality of screens sharing common information, one or more picture layers each having a plurality of slices sharing common information with respect to one of said screens, one or more slice layers each having a plurality of macroblocks with respect to one of said slices, one or more macroblock layers each having a plurality of blocks with respect to one of said macroblocks, and one or more block layers each having block information with respect to one of said blocks, said computer readable program code (b) comprising:

(b-1) computer readable program code for receiving a base coded moving picture

sequence signal, said base coded moving picture sequence signal being any one of said first coded moving picture sequence signal, said second coded moving picture sequence signal, and said differential coded moving picture sequence signal;

5 (b-2) computer readable program code for storing said base coded moving picture sequence signal received by said computer readable program code (b-1);

(b-3) computer readable program code for determining a request signal for a requested coded moving picture sequence signal on the basis of said base coded moving picture sequence signal stored by said computer readable program code (b-2);

10 (b-4) computer readable program code for transmitting said request signal for said requested coded moving picture sequence signal determined by said computer readable program code (b-3);

(b-5) computer readable program code for receiving said requested coded moving picture sequence signal;

15 (b-6) computer readable program code for extracting said base coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2);

(b-7) computer readable program code for merging said base coded moving picture sequence signal extracted by said computer readable program code (b-6) with said requested coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal on the basis of said second coefficient information obtained from said series of second picture information of said second coded moving picture sequence signal, and said differential coefficient information obtained from said differential coded signal; and

20 (b-8) computer readable program code for inputting said reconstructed first coded moving picture sequence signal generated by said computer readable program code (b-7) to be outputted therethrough.

80. A computer program product as set forth in claim 79, in which

30 said computer readable program code (b-1) has computer readable program code for receiving said second coded moving picture sequence signal,

said computer readable program code (b-2) has computer readable program code for storing said second coded moving picture sequence signal received by said computer readable program code (b-1),

35 said computer readable program code (b-3) has computer readable program code for determining a request signal for a requested differential coded moving picture sequence signal on the basis of said second coded moving picture sequence signal

code (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

83. A computer program product as set forth in claim 79, in which

5 said computer readable program code (b-1) has computer readable program code for receiving said differential coded moving picture sequence signal,

said computer readable program code (b-2) has computer readable program code for storing said differential coded moving picture sequence signal received by said computer readable program code (b-1),

10 computer readable program code (b-3) has computer readable program code for determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said computer readable program code (b-2),

15 said computer readable program code (b-4) has computer readable program code for transmitting said request signal for said requested second coded moving picture sequence signal determined by said computer readable program code (b-3),

said computer readable program code (b-5) has computer readable program code for receiving said requested second coded moving picture sequence signal,

20 said computer readable program code (b-6) has computer readable program code for extracting said differential coded moving picture sequence signal stored by said computer readable program code (b-2), and

25 said computer readable program code (b-7) has computer readable program code for merging said differential coded moving picture sequence signal extracted by said computer readable program code (b-6) with said second coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal.

84. A computer program product as set forth in claim 83, in which

30 said computer readable program code (b-1) has computer readable program code for receiving said differential coded moving picture sequence signal by way of broadcasting.

85. A computer program product as set forth in any one of claim 80, claim 81, and 84, further comprising computer readable program code for storing said reconstructed
35 first coded moving picture sequence signal reconstructed by said computer readable program code (b-7).

87. A computer program product as set forth in claim 79 further comprising:

(b-10) computer readable program code for decoding said first coded moving picture sequence signal or said second coded moving picture sequence signal; and

5 (b-12) computer readable program code for inputting said first coded moving picture sequence signal to generate said differential coded moving picture sequence signal,

said computer readable program code (b-1) has computer readable program code for receiving said first coded moving picture sequence signal,

10 said computer readable program code (b-10) has computer readable program code for decoding said first coded moving picture sequence signal received by said computer readable program code (b-1),

said computer readable program code (b-12) has computer readable program code for inputting said first coded moving picture sequence signal received by said computer readable program code (b-1) to generate said differential coded moving picture sequence signal,

15 said computer readable program code (b-2) has computer readable program code for storing said differential coded moving picture sequence signal generated by said computer readable program code (b-11),

20 said computer readable program code (b-3) has computer readable program code for determining a request signal for a requested second coded moving picture sequence signal on the basis of said differential coded moving picture sequence signal stored by said computer readable program code (b-2),

25 said computer readable program code (b-4) has computer readable program code for transmitting said request signal for said requested second coded moving picture sequence signal determined by said computer readable program code (b-3),

said computer readable program code (b-5) has computer readable program code for receiving said requested second coded moving picture sequence signal,

30 said computer readable program code (b-6) has computer readable program code for extracting said differential coded moving picture sequence signal from among coded moving picture sequence signals stored by said computer readable program code (b-2), and

35 said computer readable program code (b-7) has computer readable program code for merging said differential coded moving picture sequence signal extracted by said computer readable program code (b-6) with said requested second coded moving picture sequence signal received by said computer readable program code (b-5) to reconstruct said first coded moving picture sequence signal in said desired size.

Claims 88-93 are cancelled